REMARKS

The Examiner is thanked for the examination of the application. In view of the foregoing amendments and the remarks that follow, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections.

35 USC 101:

Claims 17, 24 - 26, 30, and 44 have been rejected under 35 USC 101 as allegedly not being directed to statutory subject matter. In response to this rejection, the Examiner's attention is directed to a very recent decision from the U.S. Court of Appeals for the Federal Circuit dated December 8, 2010 in *Research Corporation Tech. v. Microsoft Corp.*, Slip Opinion 2010-1037, a copy of which is submitted herewith.

In the case, several claims relating to image data processing were accused of failing to comply with 35 USC 101. Representative examples include claim 1 of U.S. Patent No. 5,111,310:

> 1. A method for the halftoning of gray scale im-ages by utilizing a pixel-by-pixel comparison of the image against a blue noise mask in which the blue noise mask is comprised of a random non-deterministic, non-white noise single valued function which is designed to produce visually pleas-ing dot profiles when thresholded at any level of said gray scale images.

And, claim 11 of U.S. Patent No. 5,341,228:

> 11. A method for the halftoning of color images, comprising the steps of utilizing, in turn, a pixel-by-pixel comparison of each of a plurality of color planes of said color image against a blue noise mask in which the blue noise mask is comprised of a random non-deterministic, non-white noise single valued function which is designed to provide visually pleasing dot profiles when thresholded at any level of said color images, wherein a plurality of blue noise masks are separately utilized to per-form said pixel-by-pixel comparison and in which at least one of

said blue noise masks is independent and uncorrelated with the other blue noise masks

The decision by the Chief Judge of the Federal Circuit clearly held that such claims were statutory subject matter under 35 USC 101. The Examiner's attention is directed to the following sections from pages 15 - 16 of the slip opinion:

>...The '310 and '228 patents claim methods (statutory "processes") for rendering a halftone image of a digital image by comparing, pixel by pixel, the digital image against a blue noise mask.
>
> The invention presents functional and palpable applications in the field of computer technology. These inventions address "a need in the art for a method of and apparatus for the halftone rendering of gray scale images in which a digital data processor is utilized in a simple and precise manner to accomplish the halftone rendering." '310 patent col.3 ll.33-40. The fact that some claims in the '310 and '228 patents require a "high contrast film," "a film printer," "a memory," and "printer and display devices" also confirm this court's holding that the invention is not abstract. Indeed, this court notes that inventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.
>
> This court also observes that the claimed methods in-corporate algorithms and formulas that control the masks and halftoning. These algorithms and formulas, even though admittedly a significant part of the claimed combination, do not bring this invention even close to abstractness that would override the statutory categories and context. The Supreme Court has already made abundantly clear that inventions incorporating and relying upon even "a well known mathematical equation" do not lose eligibility because "several steps of the process [use that] mathematical equation." *Diehr*, 450 U.S. at 185. Indeed, the Supreme Court counseled:
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>> In determining the eligibility of respondents' claimed process for patent protection under sec-tion 101, their claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps may be patentable even though all the constituents of the combination were well known and in common use before the combination was made.

Id. at 188. Borrowing from the reasoning of the Supreme Court in *Diehr*, this court observes that the patentees here "do not seek to patent a mathematical formula. Instead, they seek patent protection for a process of" halftoning in computer applications. *Id.* at 187. More-over, because the inventions claimed in the '310 and '228 patents are directed to patent-eligible subject matter, the process claims at issue, which claim aspects and applications of the same subject matter, are also patent-eligible.

In view of the holding and comments of the Federal Circuit, Applicants submit that the claimed subject matter is clearly statutory - as defined by 35 USC 101. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejections.

35 USC § 112, second paragraph:

Claims 1, 3 - 9, 11 – 15, 17 – 34, and 42 - 47 have been rejected under 35 USC § 112, second paragraph. The Office Action alleges that the specification discloses multiple steps that could be covered by certain elements of the claims. Specifically, the Office Action alleges that it is not clear which portions of the specification relate to the "means for detecting a user selection" in claim 1. The Office Action refers to step S101, step S102, the step before S101, and step S103.

In response to the rejection, the independent claims have been carefully amended to closely recite the language from the specification. See, in particular, paragraph [0057] of the published application US 2002/0028020:

[0057] First, in step S101, the start of a pre-scan of a document is specified. In this way the scanner engine 180 optically reads a document comprising the entire surface of a single page, e.g., a newspaper, magazine or the like. The scanner engine 180 executes a pre-scan for an approximate reading of a document, and executes a main scan for detailed reading of the document. Pre-scan image data output from the scanner engine 180 are input to the mark detecting section 171.

However, the claimed invention is not limited to the preferred disclosed embodiments.

According to the specification, step S101 includes executing a pre-scan and the pre-scan image data are input to the mark detecting section 171. See paragraph [0057] of the published application. The mark detecting section 171 detects the line 12. See Figure 4 and paragraph [0058]. Although the claims are not limited to the preferred disclosed embodiments, the Examiner is advised that the line 12 relates to the user selection, and the "means for detecting a user selection" of claim 1 relates to the scanning process in which the line 12 is detected.

Step S102 is a step that is conducted after step S101. Step S102 is for determining whether or not the mark, e.g., line 12, has been detected. *Step S102 does not relate to detecting the mark itself.* It is a step that is conducted *after* the mark detecting step.

Step S103 is a process that is executed *if* it is determined that the mark was not detected in step S102. Thus, step S103 also does not relate to detecting the mark.

The step before step S101 refers to the user placing a mark on the document, such step is not included in "means for detecting a user selection". The detection of a user selection presumes that the user selection has already been made.

Thus, it should be clear that the "means for detecting a user selection" can only relate to step S101 – at least in the disclosed embodiment. However, as set forth above, the claims are not limited to the preferred disclosed embodiments.

However, claim 1 is an open claim. It is clear that an open claim may cover a device that includes elements in addition to those recited in the claim. Thus, there is

no language in claim 1 that precludes the claim from covering a device that, in addition to having "means for detecting a user selection", can also have means for conducting step S102, the step before S101, or step S103. Thus, the claimed device may be capable of conducting step S102, the step before S101, or step S103. However, it is not required that the claimed device be capable of conducting step S102, the step before S101, or step S103.

Similar analysis applies to the remaining independent claims. If the Examiner is of the opinion that additional issues remain concerning 35 USC 112, the Examiner is encouraged to telephone the undersigned so that proper resolution can be promptly reached.

Accordingly, in view of the foregoing amendments to the claims, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections.

Prior Art issues:

Although there are no pending prior art rejections, the Examiner and Applicants' attorney previously discussed two prior art references: U.S. Patent No. 6,466,954, hereinafter "*Kurosawa*", and U.S. Patent No. 5,201,011, hereinafter "*Bloomberg*". The Examiner alleged that *Kurosawa* may teach steps similar to step S102, and that *Bloomberg* may teach step S101.

Kurosawa discloses that "in a document image processing apparatus to input a document as the image data (for example, a facsimile apparatus or a copy machine), a user indicates the necessary area to be edited from the document on a display using a pointing device." See column 1, lines 14 - 18. Thus, *Kurosawa* requires a ***display*** for the user to select the plurality of document blocks. Further,

since the display of *Kurosawa* would need to reproduce the contents of the documents in a form recognizable to the user selecting portion(s) thereof, *Kurosawa* requires a relatively large (and expensive) display. The present claims, however, do not require a display for the user to select the plurality of document blocks. In particular, as explained on page 9, lines 19 - 21, of the present specification, the "mark is added to the document by the user beforehand using a marker such as a felt-tip pen or the like." The marked document is then scanned.

Bloomberg is older technology that simply teaches how a scanner can detect a hand marking. *Bloomberg* does not overcome the deficiency of *Kurosawa*.

Conclusion:

Accordingly, the Examiner is respectfully requested to allow the application.

Respectfully submitted,

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